It is noted that a good deal depends on the efficiency of accidental or occasional dispersal.—H. C. COWLES.

The origin of Monocotyledons by self-adaptation.—A great many years ago HENSLOW proposed the strange theory that Monocotyledons have arisen from Dicotyledons through self-adaptation to an aquatic habitat. Recently he has published[16] further along similar lines; now, however, he regards the notion as a fact instead of a theory, although his line of reasoning is practically unaccepted and is quite out of harmony with the views of modern morphology and ecology. His argument is based on the unsound premise that such formative reactions as those of amphibious plants to water lie at the root of the evolutionary process. No one knows what lies at the root of the evolutionary process, but it is rather certain that it is not this. Water is regarded as causing degeneracy in form and structure, and aquatic seed plants are regarded as degraded land plants. Monocotyledons are supposed to have arisen from Dicotyledons by such degeneracy; non-aquatic Monocotyledons have merely crawled back again upon the land, though retaining their degenerate features. Other authors have regarded Monocotyledons as degenerate Dicotyledons, but self-adaptation as a cause of degeneracy has rarely been postulated; indeed the two ideas, self-adaptation and degeneracy, to the reviewer seem mutually contradictory. A form that is plastic and becomes suited to its environment should not be called degenerate, even though certain organs are reduced or even lost.—H. C. COWLES.

Anatomy of the node.—SINNOTT[17] has concluded that the anatomy of the node may be of great service in indicating the relationships of angiosperms. He considers the "trilacunar" type of node as probably the most ancient available type, meaning that there is a foliar supply of three bundles, each causing a gap of its own in the stem cylinder. This type is characteristic of the Amentiferae, and is present in the majority of Ranales and Rosales. Derived by reduction from this type, as indicated by the study of transitional families, is the "unilacunar" type, characteristic of all the Centrospermae and also of numerous families of the Archichlamydeae and Sympetalae. There is also a "multilacunar" type, derived by the "amplification" of the primitive trilacunar type, which reaches its highest development in Polygonales and Umbellales.

In developing the facts, SINNOTT has examined about 400 genera, distributed among 36 orders, and gives a list of families with their number of nodal

---

[16] HENSLOW, G., The origin of Monocotyledons from Dicotyledons through self-adaptation to a moist or aquatic habit. Ann. Botany **25**:717–744. 1911; see also Jour. Roy. Hort. Soc. **37**:88–94, 289–294. 1911.

[17] SINNOTT, E. W., Investigations on the phylogeny of angiosperms. I. The anatomy of the node as an aid in the classsification of angiosperms. Amer. Jour. Bot. **1**:303–322. *pls. 30–35.* 1914.

gaps. He feels justified in expressing the opinion that nodal anatomy will take an important place in the final construction of the phylogeny of angiosperms.—J. M. C.

Marine algae of Peru.—HOWE[18] has published an account of the marine algae of Peru, based chiefly upon collections made by Dr. ROBERT E. COKER while acting as fisheries expert to the government of Peru during the years 1906–1908. The list includes 96 species, 29 of which are described as new. Among the latter is a new genus of Rhodophyceae (*Lobocalyx*), referred to Nemalionaceae. The distribution among the great groups is as follows: Cyanophyceae 7, Chlorophyceae 20, Phaeophyceae 15, Rhodophyceae 54. The economic importance of the marine algae, recently emphasized by investigations carried on by the United States Department of Agriculture, is referred to in this report. Attention is called to the fact that *Macrocystis* and the other large seaweeds (as *Lessonia* and *Eisenia*) are abundant on certain parts of the coast of Peru, and that they may prove important as a source of "potash."—J. M. C.

Liverworts of Peru.—The Yale Peruvian Expedition of 1911 collected 31 species of Hepaticae in a condition to be identified, 14 genera being represented. Of three thallose species, two belong to Marchantiales. According to EVANS,[19] six species are new: one in *Metzgeria*, four in *Plagiochila*, and one in *Lejeunea* (*Dicranolejeunea*). Apparently all of this material is desiccated and therefore unfit for critical morphological study. It is unfortunate that even at the present day most collectors do not realize the importance of properly preserved material. In the naming of some of these new species "honor" is conferred upon different individuals. It is to be hoped that taxonomists of the future will use descriptive names so far as possible when describing new genera and species.—W. J. G. LAND.

Lepidostrobus.—MRS. ARBER[20] has published an anatomical study of *Lepidostrobus*, which brings together our previous knowledge of the genus and adds some unrecorded features. Perhaps the most noteworthy new feature is the presence of a sterile plate in the sporangia of *L. Oldhamius* and *L. foliaceus*. This delicate radial plate arises from the floor of the sporangium, and dies out toward the distal end. Two new species are described, *L. Binneyanus* and *L. gracilis*, and also two new forms of *L. Oldhamius*.—J. M. C.

---

[18] HOWE, MARSHALL AVERY, The marine algae of Peru. Mem. Torr. Bot. Club **15**:1–185. *pls. 1–66.* 1914.

[19] EVANS, ALEXANDER W., Hepaticae. Yale Peruvian Expedition of 1911. Trans. Conn. Acad. Sci. **18**:291–345. *figs. 11.* 1914.

[20] ARBER, AGNES, An anatomical study of the paleozoic cone genus *Lepidostrobus*. Trans. Linn. Soc. London II. Bot. **8**:205–238. *pls. 21–27.* 1914.